



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





شبكة المعلومات الجامعية



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكرو فيلم

# جامعة عين شمس

التوثيق الالكتروني والميكروفيلم



نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
علي هذه الأفلام قد اعدت دون أية تغيرات



## يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of  
15 – 25c and relative humidity 20-40 %



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# بعض الوثائق الأصلية تالفة



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بالرسالة صفحات

لم ترد بالأصل

B95V1

Ain Shams University  
Faculty of Science  
Biochemistry Department

**CYTOKINE PRODUCTION BY PERIPHERAL  
BLOOD MONONUCLEAR CELLS OF  
SCHISTOSOMIASIS PATIENTS**

Master Thesis

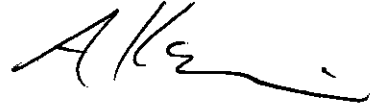
By

**Manal Ibrahim Moustafa Abd El-Hamed**

Under Supervision of

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Professor, Biochemistry Department  
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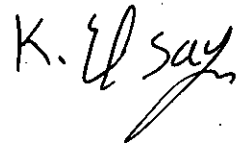
**Dr. Magdy Mahmoud Mohamed**

Ass. Professor, Biochemistry Department  
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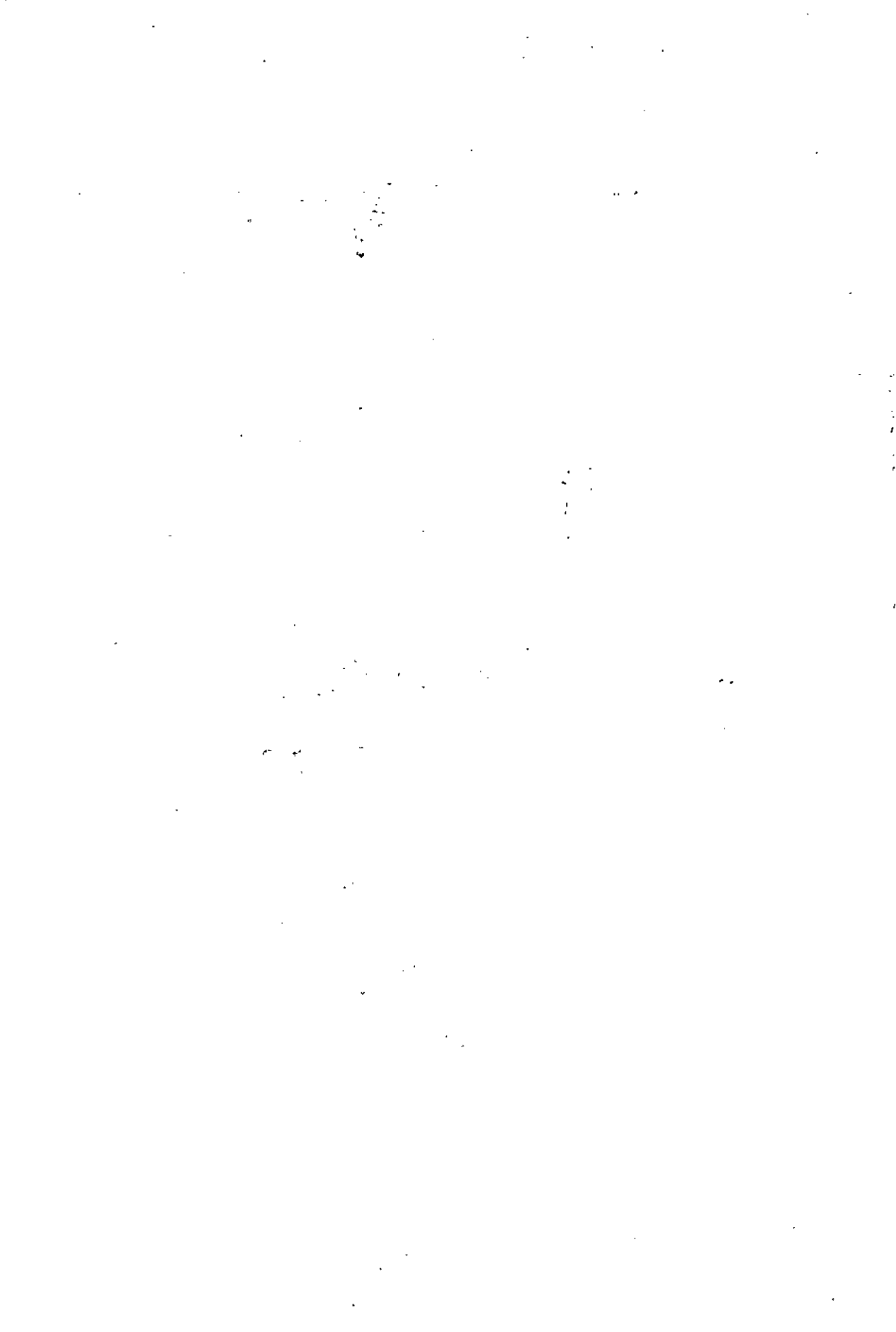
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2001



**CYTOKINE PRODUCTION BY PERIPHERAL  
BLOOD MONONUCLEAR CELLS OF  
SCHISTOSOMIASIS PATIENTS**

By

**Manal Ibrahim Moustafa Abd El-Hamed**

**Thesis**

Submitted for Partial Fulfillment  
of The Requirements of M. Sc. Degree  
in Biochemistry

**Biochemistry  
Faculty of Science  
Ain Shams University**

**2001**







*To*

*My Parents*

*My Husband*

*& My Sons*

*Yehia &*

*Mohamed*



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ  
اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ (١)  
خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ (٢) اقْرَأْ وَرَبُّكَ  
الْأَكْرَمُ (٣) الَّذِي عَلَّمَ بِالْقَلَمِ (٤) عَلَّمَ  
الْإِنْسَانَ مَا لَمْ يَعْلَمْ (٥)

صدق الله العظيم

سورة العلق

100

100 (1) 100 (1)

15 (5)

— 10 —

## Abstract

Cytokine Production by Peripheral Blood Mononuclear Cells of Schistosomiasis Patients.

By **Manal Ibrahim Moustafa Abd El-Hamed**, Ain Shams University, Faculty of Science, Biochemistry Department.

### ***Abstract:***

This work was conducted in order to study and compare the T helper-1 (Th1), Interferon- $\gamma$  (IFN- $\gamma$ ) and T helper-2 (Th2), Interleukin-4 (IL-4), cytokine production by Peripheral Blood Mononuclear Cells (PBMC) as well as the humoral IgG response to Sm20.8, a candidate vaccine antigen and soluble egg antigens (SEA) in the context of natural human infections.

The study was carried out on 20 patients infected with *Schistosoma mansoni* (8 hepatointestinal and 12 hepatosplenic) and 15 normal control subjects

While patient IFN- $\gamma$  levels for both the hepatointestinal and hepatosplenic groups were elevated compared to control, our study shows no further stimulation by the mitogen Con-A, SEA or the recombinant antigen Sm 20.8. On the other hand IL-4 was somewhat stimulated in response to the three stimulants however the elevation approached significant levels only in cases of

hepatointestinal and hepatosplenic patients stimulated with the Sm 20.8 antigen. Serum from patients of both groups also displayed significant IgG responses to both Sm 20.8 and SEA. It therefore appears that recombinant Sm 20.8 is recognized by the humoral as well as the Th2 component of the cellular system which is the dominant response in schistosomiasis patients. Sm 20.8 is therefore likely to contribute good protective epitopes to a subunit vaccine designed to stimulate protective responses.

**Keywords:**

Schistosomiasis, *Schistosoma mansoni*, cytokine, Th-1, IFN- $\gamma$ , Th-2, IL-4, PBMC, IgG, IgG subclasses, IgE, recombinant vaccine candidate.